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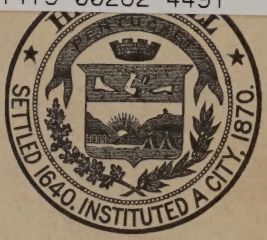

Feb. 26, 1902[redacted]

MR. E. SWAYSLAND'S REPORT

ON THE

AMERICAN METHODS

OF

Boot and Shoe Manufacture.

Reprinted and Published by the "Boot and Shoe Trades' Journal,"
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MR. E. SWAYSLAND'S REPORT

ON THE

American Methods of Boot and Shoe Manufacture.

Scope of Inquiry.

Considering the area of the United States of America, the diversity of climate, the many nationalities of the people, and the consequent great differences in their requirements, there can be no doubt that a considerable variety of foot wear is required by them; and as practically all these goods are produced within the country, a thorough inquiry into the whole of the methods in use would result in the collection of interesting information.

But as my investigation on behalf of the Northants County Council were for the purpose of acquiring information respecting the instruction given in the application of scientific principles to the manufacture, and the best methods and machinery in use in America generally, and particularly that employed in the production of goods most likely to compete with those manufactured in Northants, I confined my enquiries to the districts where such information was most likely to be procured.

With this object I visited Boston and surrounding districts, Lynn, Brockton, and Weymouth, New York and District, Brooklyn, Newark and Elizabethport, Rochester, N. Y., Toronto, and Montreal

Conditions of Trade.

The condition of trade appeared to be fairly good, but several prominent business men told me that the previous three years had been the worst, from a commercial point of view, experienced for

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many years. I was given to understand that although established firms had generally got safely through the period of great depression (1892-94), new undertakings were frequently unsuccessful, particularly when on a small scale, and that when a failure did occur it is, owing to the State laws, very easy for unscrupulous debtors to evade the consequences.

I found that the full flow of trade was confined to certain seasons, and that the periods of greatest pressure was just preceding Spring and Fall—the Spring trade being much the larger. This really divides the working seasons into two; about five months for the Spring, and three to four months for the fall.

The intensity of these periods is greater in some districts than in others, and in some classes of trade than in others; but I believe that on an average the factories make about nine months' time in the twelve. It is usual to quite close and cease production in Mid-winter and Midsummer. This close time or "shut down" varies with the trade from two weeks to four between each season. There are also periods during which three-quarter or half-time is worked. The workmen refer to the shops as "nine month" or "ten month" shops; referring to the actual time worked in the year.

Standard of Living.

The standard of living among the working people is undoubtedly higher than among those in a similar position in England. I found all classes of work people better dressed, and with better, or more showily furnished homes, than is usual in England. The working people are more independent in their bearing and ideas, have less regard for industrial or trade organisations, and generally, to me, appeared more interested in the protection of such rights as appeared to affect individuals, than in those which affected the community at large. Consequently trades' unions are practically powerless; strikes do occur, but rarely result in favour of the men. In this connection it must be understood that there is in every centre of shoe manufacture a large per-centage of the population who may be termed migratory, who have no tie, kith or kin, and who are prepared to take any man's place without fear.

This regard for the individual, and the shortness of the periods of full time, has a tendency to cause men and women to concentrate all their energies on their work. While inspecting the work-rooms I never saw a single individual who did not appear to be working as hard as she or he could. During these "runs" the work people earn a large wage, but, owing to the expensive living and long holidays, few appear to provide for their future. Exceptions can be made to this. In New York district, and in Lynn, Rochester, and Toronto, I was told that very few working men saved money; the tally system in its worst form is prevalent, and long credit and high prices kept the people living from hand to mouth; but in Brockton, generally called the Northampton of America, a large number of shoe workers own their own houses, have money saved, and are generally in a prosperous dondition. Brockton has voted no licence for several years.

Educational.

The native-born American is generally a fairly well educated person. The "compulsory" standard is, I believe, higher than in England; the children are certainly kept at school longer or to a greater age than in England, and free scholarships enable the capable to continue their studies and to specialise them with a view to certain professions and occupations.

The standard of teaching in the public schools is recognised as being of such excellent character that children of persons in all social positions obtain their elementary education at them. This intercourse between the children of people in different social positions has an excellent effect on the mass of the people. The average American workman has an accent and bearing quite superior to the average English workman.

It is quite common for the children of working people to remain at school until nearly eighteen years old, and seldom that workers less than that age are seen in shoe factories. I am sure that in all the factories I visited I did not see more than six workers under eighteen years of age—and those were over sixteen.—I made careful inquiry at each factory.

In Massachusetts there are special technical institutes, mainly for the specialisation of studies for certain arts and manufactures. The Massachusetts Institute of Technology, as a scientific school or college of industrial science, provides an extended series of scientific and technical studies, and of practical exercise in immediate application of the principles and technical rules acquired in the lecture room. The subjects have been arranged in thirteen distinct courses of four years' duration. For the satisfactory completion of any one of these courses a degree is conferred by the Institute. A record of the graduates and their present occupations shew that they occupy important positions as managers and directors of large engineering, tanning, chemical, and other scientific industries. A special course is arranged at the Institute for students of mature age who are already engaged in an industry, which they wish to study in its scientific aspect.

The Directors of the Institute also direct the Lowell School of Practical Design, which was established in 1872 by the Trustee of the Lowell Institute, for the purpose of promoting industrial art. Tuition is free to all pupils. The course is of three years' duration and embraces:—(1) Technical manipulations. (2) Copying and variation of designs. (3) Original designs or composition of patterns. (4) The making of working drawings and finishing of designs. To teach drawing is not the object of this School. Applicants must therefore possess a knowledge of drawing adequate to enable them to begin the work of composition and design. These courses are open to either sex. The hours of attendance are from 9.30 to 12 and from 1 p.m. to 3.30 p.m. The Lowell Free Courses of Instruction are also established under the supervision of the Institute of Technology. Courses of instruction, generally given in the evening, are open, free, to students of either sex, and include elementary science, art, history, and literature.

In each of these Institutes it appears to be the object to provide substantial teaching, rather than popular illustrations of the subjects treated. It is the rule, where it is thought that students are not capable of profiting by the instruction given, to privately advise them to withdraw, in such a manner that it appears quite voluntary.

This provision for the higher training of students entering trades results in the productions of workers who have a general knowledge of the principles of design and manufacture, and who, although not so skilled as the average English workman, are more capable of adapting themselves to change of occupation, or from branch to branch, and who are more scientific in their conceptions of manufacture generally.

Design and Sub-division of Labour.

The faculty for scientific design is apparent in the ordinary productions of American shoe manufacturers. If compared to the average English designs it will be found that whereas in English designs the difficulties of construction are usually totally disregarded, in American productions the design and embellishment is always arranged, with a regard to ease and simplicity of construction. The English shoe-worker is the best workman, but the American has the better knowledge of the principles of his trade. The needless intricate construction of most English boots and shoes and the insufficient preparation of the parts are the great obstacles to the sub-division of labour in England. The simplicity of construction and the exact provision for the most minute details are the means which make sub-division of labour profitable to both employer and workman in America. But this care in design has probably grown out of necessity, for the present condition of manufacture appears to be the outcome of a previous scarcity of labour, a great demand for manufactured articles, and a relatively low value of material. In fact I observed that even now, with material very high in price, there was not so much regard paid to economy in material as I should expect to see in an English factory.

The modifications, with a view to economy in material usual in English work is not practised—pieced vamps either at the toe or in the golosh are not used. It is the general opinion that toe-joiners are not really economical, and pieced goloshes are not approved. The exclusive use of whole goloshes or vamps in men's work is the cause of the large number of golosh centres sent to England.

The present methods of shoe manufacture prevailing in America are so palpably an outcome of a peculiar condition of labour in this industry that this report would be incomplete without reference to it. It appears that previously to 1892 there was, in this industry, a scarcity of skilled labour, and a comparatively low value of material; the labour being then and still one of the highest paid in America. Consequently the methods of manufacture, based on these conditions, disclose great attention to economy in labour and utilisation of labour-saving machines or methods, and, as before stated, a less regard to economy in material than is usual in England. And the natural outcome of this is that it has become an unwritten law that all processes constituting a branch of the trade, no matter how minute or how complex they may be, shall be completed in the department devoted to the branch in question. By this rule no defects in any process which should be performed in one branch can be rectified in another. This really simplifies the work in all branches, because no provision has to be made for possible defects in the work outside the department it is at any time in. The rule that no rectification of defects is expected, apart from the process engaged on, has an important effect on the details of manufacture. As no defects can be remedied, complete provision has to be made for the exact execution of all processes, and consequently attention is given to minute details which are left to chance in England. Where, as in England, much work of a minute character is not recognised as belonging to any particular process, and consequently its execution by any particular workman becomes uncertain, there is sure to be irregularity in the product, owing to the natural irregularity in all hand processes, and consequently subsequent operations by machine cannot be so quickly or so well performed as if each part had been exactly executed in some clearly defined manner and order. This is one of the reasons why it is common for certain processes to be performed so much quicker by machines in America than by the same machines in England. There is a greater sub-division of labour than is usual in England, and most of these sub-divisions are performed by machine; processes entailing several operations, generally executed by one person in England, are sub-divided and considered distinct operations,

with special payment for each. This minute division of the operations, and consequent exact performance of minute details, is one of the special features of American shoe manufacture.

Style of Factories.

Shoe factories are generally rectangular buildings of four floors of which one is sometimes below the level of the road. In very large concerns it is usual to build about a centre square, the base of the centre being used for engine-rooms and stabling. The depth or width is generally forty feet, the run or length from one hundred and fifty to two hundred feet. As a rule they are built of wood, and are certainly rather disappointing in outside appearance, after the fine buildings, from an architectural point of view, commonly seen in centres of shoe manufacture in England. The want of solidity is in appearance only, for I found the heaviest machinery running without excessive vibration in what appeared very slightly built factories.

The stairways are generally arranged so that the workers pass either through or in view of the office. Every factory I visited was fitted with one or more lifts, and most wood buildings with outside or ermergency staircases.

The position of the various departments in the factories varies. As a rule the stock-fitting and cutting-rooms are near the office; but lifts and the telephone are so constantly used that any part of the buildings are easily communicated with—or the goods lowered or raised from department to department.

In most factories I found printed rules forbidding employés from leaving the factories except at specified times. This rule is the only means of ensuring them remaining, for by the law no doors may be locked during working hours, and factory inspectors have the power to break open any doors found locked during such time.

Work Tickets and Payment of Wages.

Wages are paid at the end of each month, a few firms pay oftener, but the weekly payment usual in England is not customary. This applies to all workers whether by the day or piece. It might

have a tendency towards thrift, but on inquiry I found that the general opinion was that, as a rule, it encouraged the pernicious credit system prevailing.

Although there is some variation in the form of work tickets used, caused no doubt by difference in quality and quantity of work, yet practically all manufacturers used one type of ticket. These tickets and the system upon which the workers are paid are so intimately connected, that the explanation of one naturally explains the other. Taking tickets No. 1 and No. 2: these tickets represent the processes employed in producing a certain shoe; ticket No. 1 represents the upper cutting and fitting and machining; ticket No. 2 the bottoming and packing. These tickets are issued from the office simultaneously; No. 1 going to the foreman clicker, No. 2 to the foreman stock fitter. Each of these departments are usually paid by the week, the foreman in each case being responsible for the cost of production. The lower slip represents the complete work in each of these departments; the slips above being used for payment by the piece for the processes named on them. The method is very simple.

The foreman cutter having had his portion of the work done, tears off the lowest division of the ticket, retains it as a voucher for a certain amount of work to be credited to his department, and forwards the remainder with the cut work to the stitching-room. In the stitching-room most of the work is by the piece, and the order of the processes as printed on the tickets is as executed in the room, as each operative does his share, he tears off the slip representing the work done, until on the completion of the tops only the top portion of the ticket remains; this is only required to identify the tops. The work and slip is now passed to the next department, where it is added to the bottom stock, which is ready with the long ticket (No. 1). The lower portion of this ticket is retained by the foreman of the stock-fitting department as a voucher for work done in his department, and retained until pay-day, when the wages due are paid on production of vouchers.

Ticket No. 3 is a variation of the upper stock-cutting and stitching-room ticket, a separate ticket being printed for each type of

shoe. Generally the processes printed on these tickets are arranged to cover several styles of one type. In that case the clerk simply crosses out the division not required, or fills in any description necessary, and passes the tickets through in their order.

The work, now in the "gang"-room or lasting-room, is passed from hand to hand—process to process, in the order on the ticket until completed, each operator tearing off their voucher and retaining it for payment,—presuming the whole of the processes to be completed, the upper part of the ticket is now compared to the goods, by the foreman packer; if correct the goods are packed and the case marked with the case number. This case number, which is repeated on every slip, is a means of identifying the work right through the factory, and a means of identifying the workmen responsible for any part. So thoroughly is this carried out in most firms that, as a rule, they can tell at any time, on the case number being submitted, who was engaged upon any part of the work, no matter how minute the part under question.

The operations are so clearly defined and so mutually dependent, that any defect in an operation is immediately detected, and the attention of the operator responsible drawn to it. In fact any defect is detected at the next operation, and if sufficiently serious to prevent work in subsequent operations, it is returned. As a rule there is no constant supervision and examination of work by foremen, the operators appear to be mutually inspective. Where work is badly executed or accidently injured, the workmen engaged on it is charged for the damage. Consequently men will not commence on work in a condition likely to prevent them performing their operation in a proper manner.

Label ○ **No. 2.**

No.
Stitched Bkstay — Strap
Vamps — Cap
Stamp

1	½	2	½	3	½	4	½	5	½	6	½	7	½	8	½	9

Style
Last — Box
Quality — Pairs
Fairstitch
Shank
Sole
Counter
Heel
Innersole
Sewed
Fairstitch
Finish
Stock No.
Treer No.

Shank Finisher
Edge Burnisher
Edge Trimmer
Heel Burnisher
Heel Trimmer
Heeling
Fairstitch
Sewing
Tacking on
Laster
Puller over

SOLE-LEATHER ROOM.

No.

Style — Quality
No. — Light — Heavy
Width — Pairs
▭ — ½ ▭ — C — ½ C

Innersole— leather / veneer

Label ○ **No. 1.**

Quality — Strap

DERBY SQUARE TOP.

Case No. — Pairs

Hooking
Strapping
Rubbing and turning
Heeling
Trim heel seams
Seamings—linings
Stitching tongue
Stitching side seams
Stitching quarters
Stitching facings
Trimming tops
Pasting fronts
Pasting facings
Pasting lingings

No. — Qual. — Pairs

Label ○ **No. 3.**

Top — Fold
Facing — Trim
Qual. — Eyelet

BALS. ROUND TOP.

Hooking
Strapping
Heeling up
Vamping
Trim top
Pasting

No. — Qual. — Pairs

Lasts and Patterns.

In form the lasts appear to me to be the result of exact observation. There are many shapes which have palpably been designed to attract, quite independently of their suitability, for making boots for comfort. But as a rule the lasts are nearer to the natural form of the foot than the average English last. The special point is that adequate provision is made for the muscular formation of the inside waist, and for the swell of the great toe joint. The seat of the last is nearer the French spherical seat than the orthodox English square form. These points result in a less curvature of the outside joint with greater comfort than provided by English or French lasts of equal girth.

Iron lasts, so common in England, are not in use in America. In fact it would, under the system of manufacture, be nearly impossible to use them. Each person engaged in a sub-division naturally handles a large number of shoes per day, and consequently if the lasts were iron would soon be exhausted by the mere effort of handling the lasts, quite independently of the labour imposed by the operation they were engaged on.

The point is one well worth the attention of shoe manufacturers, for with the introduction of lasting machines of the Consolidated type, it is indispensible that wood lasts be used. The men working on this type of machine cannot be expected to lift large numbers of iron lasts breast high and work as rapidly as operators using wood lasts. These wood lasts have metal plated bottoms either at the seat only for machine welted, or covering the bottom for sewn work. It is recognised that metal lasts have certain advantages, and I am given to understand that a substitute for iron having its strength, but of very light weight, is about to be made. A much larger number of lasts are required by the American system, proportionate to the production. Shoes produced by the Blake process are commonly kept on the last for several days, and so become set to the form. It appears to be recognised that the longer the shoe remains on the last the better, and usually they are so kept for from three days to a week.

The patterns are of the full throat and short heel type, a good shape for light work. Most of the standards appear of quite a "bespoke" character. In this as in many other matters the shape and style appear based on the English bespoke system. Standard patterns are commonly produced by men who make a special business of pattern cutting. A few foremen and managers cut their own standard, but practically all "sets" of working patterns are produced by pattern cutters to the trade.

Upper patterns are used in cardboard, bound with brass or zinc, and in sheet zinc. It was generally admitted that bound patterns have a tendency to "buckle," and that for light work and exact cutting zinc patterns are the best.

Sole patterns or templates of iron or sheet steel are used with sole rounding machines. These are made either by the producers of the machines or by the trade pattern cutters. Some last makers supply upper patterns also.

Rough Leather Room.—Stock Fitting.

The stock-fitting-room, representing our rough-stuff cutting department, is a decided advance on anything I have seen in England. It is really a cutting, moulding, and bottom-stuff preparing room, where every process preparatory to the actual putting together of the bottom stuff is executed. The details of the work include very much which, on the English system, is left for "some one" to do among other processes. It includes all sole and insole rounding and blocking, heel building, middle and sole attaching, stiffening (counter), skiving and moulding, inside feathering, sole channeling, in fact all details connected with the shaping of the bottom stuff.

The system of cutting varies with the method of purchasing the material, some firms buying rough leather and cutting it as in England; others buying cut stock, and so only rounding up and fitting. When the rough leather is cut, presses are used; most commonly long bed presses of the "Revolution," "Harris," or "Parson" type. If cut stock is bought "sole rounders" are in use.

The knives used with the long bed press differ from those in common use in England. They are either made very deep so that the workmen can hold them between their fingers during the operation of the press, or are fitted with a broard head and round handle. The head takes the pressure of the press; the handle enables the operator to hold the cutter in position without danger to his fingers. In each case the blade is deep enough to take several soles, and so with the long press, a row of soles can be cut without moving the material or emptying the cutter. There is no need to range with a "Revolution" press; the operator simply shifts the knife as each sole is cut, until the row is finished or the knife full.

The materials used in bottoming does not vary so much as in England. Practically only three sole leathers are in use. Oak sole is used for men's best work and for some ladies' work. "Union" sole is used for all medium class girls' and women's, and "hemlock" for all common work and much medium priced men's and boys'. The great variety of mixed tannage bends used in England are not in use in America. The stock generally is thinner than English bottom stock, so light that a special sewing channel has to be used for it. This channel is really a split, and I hear that it wears badly; several practical men told me that it quite commonly came up after a few hours' wear and has to be cut away by the wearer.

The use of "compo" is more common than in England. From what I observed I am sure American shoes contain less solid leather than English goods at the same price, and the difference in the weight is made up with "compo" or "pancake." This substitute for leather is made from the waste skivings and splittings from other parts, and appears to be made by simply pasting the pieces in layers as nearly level as possible, and then subjecting the "pancake" to great pressure between steel plates. I saw the process in a New York factory, where girls were engaged under conditions I should be sorry to think would be allowed in England. This "pancake" is used for "middles" and lifts. Insoles are either "solid," *i.e.*, all leather or veneer, a skiving of leather backed up with cardboard. Shoes costing over one dollar twenty-five cents are usually solid. If under that

price the veneer insole is usually put in. Middles are arranged according to prices, as the insoles. But in quite low grade shoes I found English bellies being used for insoles and middles. Owing to their light relative weight to surface they were really cheaper than hemlock, even with the heavy duty added. Goodyear welted insoles are often cut from a special Union-tanned leather, very tough, flexible, and light in weight. Stiffenings for ladies' work are commonly cut from hemlock leather and sold to shoe manufacturers ready moulded. Common qualities are "pasted" or veneer. The cost is from two cents upward, rather more than would be allowed for the same class of stiffening in England. Large quantites of Australian sides are used for welted insoles, lifts, and other parts in shoes where lightness in weight is an advantage. Many manufacturers buy their stock of the exact substance required by them and already cut to a stock form, afterwards rounding them up on a rounder. This system enables the manufacturer to get a more accurate estimate of the cost of his produce than is possible under the system of buying rough leather and cutting various qualities from it. Some firms use a system which is a combination of these two methods; they buy rough leather, cut it on the "Knox" principle, and then "round" up on the machine as required. This system, although slightly more expensive as regards material, saves the stocking of large quantities of cut soles. A rough form is cut which will produce any shape sole. This shape is rounded up as required, whereas if cut out to a certain form it might, owing to other shapes being for a time in demand, lay in stock; cut stock, not available for use, is sometimes a serious matter.

The "fitting" of stock is most thoroughly performed; all stiffenings are skived where not already moulded, insoles feathered; and for welted work channelled and split. Every part of the bottom is levelled and fitted part to part as exact as if the pieces were parts of a machine. No matter how small or apparently unimportant the part may appear to be it is accurately fitted. Certainly the fitting of the bottom stock is far in advance of anything attempted in England. This exact preparation includes much work considered

as part of the "lasters'" work under the English method, and, of course, much of the cost of lasting, English reckoning, must be transferred to the stock fitting when comparing the wage lists.

All the stock fitting operations are performed by machine. Counters are skived on the "Watson" and moulded on the "Young" machine; there are many makes of sole moulding machines, all very similar in principle. The "Cutcheon & Johnson" moulder appeared to be used with great success.

The use of rubber solution is very common in all grades of work; middles and sole are usually cemented together with this; in some good class work the heel lifts are also cemented together, making a very solid heel.

The cut-stuff fitted up for the laster leaves the department absolutely ready to be attached to the uppers. No after trimming of edges by hand is attempted, prior to the operations of the finishing.

STATEMENT OF WAGES.

Rough Leather Cutting and Fitting—Bottom Stock Department. 1a.

* $1·00 considered as being equivalent to £0 4s. 2d. English, nearest ¼d. in each case.

Description.	Wage per week.	
	American.	English.
		£ s. d.
Sole Cutters	$15·00	3 2 6
,, Rangers	13·50	2 16 3
Rounders	18·00	3 15 0
Splitters	13·50	2 16 3
Sorters	15.00	3 2 6
Channelers	15·00	3 2 6
Lift Cutters...	10·50	2 3 9
Lads, after three months' probation ...	9·00	1 17 6

Stock Cutting and Fitting—Piece Work. 1b.

* MACHINE PROCESS.

DESCRIPTION.	Per 60 prs. American.	Per 60 prs. English. £ s. d.
Complete Fitting, including preparing stock, veneering, clinking soles, stamping, moulding, and channeling soles and outer soles, putting on taps, turning channels, shellacking one coat—Meaning to include all work between cutter and laster	$0·60	0 2 6

Stock Fitting.—HAND PROCESS. 1c.

DESCRIPTION.	Per pair. American.	Per pair. English. £ s. d.
Rounding innersoles	$0·02	1
Fitting shanks	·02½	1¼
,, single soles	·09	4½
,, double ,, ...	·11	5½

Stock Cutting and Fitting. 1d.

* MACHINE PROCESS.

DESCRIPTION.	WAGE PER WEEK. American.	WAGE PER WEEK. English. £ s. d.
Ranging, rolling, and splitting	$13·20	2 15 0
Cutting outsoles, outside and inside ...	14·10	2 18 9
Taps and doublers	13·20	2 15 0
Sorting	13·20	2 15 0
Cutting innersoles	13·20	2 15 0
Sorting ,, moulding, and channeling...	11·10	2 6 3
Cutting top lifting	12·00	2 10 0

Stock Cutting and Fitting. 1e.

*

DESCRIPTION.	WAGE PER WEEK. American.	WAGE PER WEEK. England. £ s. d.
Sole Cutters	$15·00	3 2 6
Moulders	13·50	2 16 3
Innersole and Tap Cutter	15·00	3 2 6
Pasters and Heel Builders	10·00	2 1 8

Upper Cutting Room.—"Clicking."

There is little difference between the appearance of this room in England and America. The sub-division of labour usual was of course seen here, but so far as the actual cutting is concerned I could not see any marked improvement on English methods; As in the stock fitting there appeared to be more desire to produce a given amount of work in a given time than to pay much attention to economy in material.

The methods of cutting, as regards the lines of tightness in leather, is similar to that practised in English best class bespoke work; the quarters of ladies' button work are cut tight across the heel line and tight across vamp.

The patterns were commonly of cardboard, bound with brass or zinc, but on enquiry I was told that it was found that for clean cutting on soft materials zinc patterns were best. The wages paid were, according to English standards, very high. The statements attached represent different districts and are as paid; but I found that at Lynn and Brockton some effort is being made to secure an uniform payment to cutters of $17·00 per week.

The cutting-room includes all skiving, punching, and notching and so the work on leaving this department is quite prepared for seaming together in the stitching. Very little machinery not known in England is used here, the only exception is an apparatus which cuts out the centre of vamp, marks the size, marks the centre, and position of toe-cap, at one operation.

With the exception of patent and some best grades of waxed calf, nearly all upper material is of native production. For men's work, hemlock tanned calf skins and split, satin, and glove hides are used; these are all well known in England. In very light men's work, Dongola, either plain or grained face, is used for the legs, usually in combination with a satin or glove split for vamps. For very light and high-class men's tops, and for ladies' best work, American chrome tanned glacé is used, it is certainly a beautiful leather, and a credit to the patience, skill, and science brought to bear

in its production. I regard it as little short of a calamity that English leather producers cannot at present essay much more than to manufacture imitations of the upper leathers of other countries.

I had the pleasure of visiting an upper leather factory where good leather was being tanned in nine hours, and has been done for some time—while in England it is still being debated whether it is possible to produce it in the time. Some firms are producing beautiful specimens of coloured leathers of crome tannage. There can be no doubt that American producers of light upper leathers have a far more scientific and practical system than has hitherto prevailed in England, and the result must be that in the near future their light leathers will become as indispensible to manufacturers in England as their splits already are.

STATEMENT OF WAGES. 2a.

* MEN'S AND BOYS'.

Clicking.

Per day of *10 Hours*—59 Hours per week.

DESCRIPTION.	Per day 10 hrs. American.	Per day 10 hrs. English. £ s. d.
Sample Cutters	$3·00	12 6
Calf, Patent, Kangaroo, and Glacé ..	2·75	11 5½
Dongola, Goat, and Sheep	2·50	10 5
Trimming Cutters	2·50	10 5
Rounding and Skiving...	2·50	10 5
Stamping and Blocking	1·75	7 3½
Sorters	3·25	13 6½
Boys, after three months' probation ...	1·50	6 3

Various Processes executed in Clicking-room.

*

DESCRIPTION.	Per 48 prs. American.	Per 48 prs. English. £ s. d.
Skiving goloshes	$0·18	9
,, quarters	·15	7½
,, ,, and button pieces ...	·20	10
,, vamps	·15	7½
Notching facings	·15	7½
,, caps	·10	5
,, vamps	·25	1 0½
Punching caps	·08	4

STATEMENT OF WAGES. 2b.

* Women's, Misses', and Children's.

Clicking.

60 pairs Women's or Misses'—72 pairs Children's.

Description.	Per 60 prs. American.	Per 60 prs. English. £ s. d.
Glacé and Glove Button, outsides ...	$1·90	7 11
Grain and Mk. Glove ,, ,, ...	1·30	5 5
Indian Goat ,, ,, ...	1·67	6 11½
,, ,, pebbled ,, ,, ...	1·55	6 5½
,, Sheep and Native Sheep button ...	1·55	6 5½
Dongola Kid button, outsides	1·70	7 1
,, Sheep ,, ,, ...	1·60	6 8
Linings	·15	7½
Vamp linings	·10	5
Button stay...	·05	2½
Half vamp linings	·12	6
Button fly half drill	·05	2½
Top-band, single cut	·20	10
,, half ,, ...	·25	1 0½
Button fly	·20	10
Inside stay	·30	1 3
Facings inside	·30	1 3
Toe-caps (stamped)	·30	1 3
,, ,, two thick	·20	10
Outside facings	·60	2 6
Back straps	·30	1 3

Standard height 6½in. ; ½ c. per case for extra inch.
Outsides for Lace-work 20 c. per case less than Button.
Button Flys rounded out rough by cutter.

Stitching Room.—"Fitting and Machining."

This department, representing the first portion of what may be termed the constructive part of boot manufacture, the effect of the practical designing and exact shaping and preparing previously described becomes apparent. The trimming-up and re-shaping of the parts, so common in this department in England, is not necessary As all cutting has already been accurately performed, it only remains for the parts to be actually attached together. Consequently, in contrast to the English system, there is much less sticking of the parts together; the machinists hold the pieces in position as the machine stitches or sews.

This is only possible where the design allows of it, and as before stated most American designs do. It is generally thought that the workers are very much more rapid than in England. I do not think so, in fact I am sure that under similar conditions our workers in this department are in most processes quite as efficient.

All machines are arranged on benches, facing the light, and are driven by power. The order of the machines and operatives is the same as the order of the processes, so that no confusion is caused by needless carrying about of the work.

Practically all medium class work produced in America has turned or "bagged" edges. This bagging process is already used for low shoes in England, and is recognised as a very simple method. In America the principle is applied to lace and button boots; inspection of these goods will disclose the fact that all medium and cheap work is produced by this system. The method of course depends on the design, so probably it will be best to describe an upper largely produced, and the method and cost of closing it.

The top was whole goloshed, with cap, light top, turned in facing, turned over (bagged) top, open stitched back, with straight tongue. The inside facings are first stuck on to the lining and then stitched. The back web is seamed with a two-needle machine—quite commonly a loop stitch machine—and the top band stitched. The quarters are meanwhile turned up the facings on the Lufkin folder, the facing now stitched, and the back seamed and open stitched. The linings and legs are now ready for attaching. This is effected by the face of the legs being laid towards the face of the lining, the loop placed in position, and the two edges stitched together. The next operation is turning the leg of the boot over so that face is right side out. Some tops are simply stitched up the edge of the facing, others are stitched along the top as well. The latter method is the most solid; the plain facing stitch the more flexible. The loop is next stayed, and the upper is ready for attachment to the vamp. The vamp has previously been capped and seamed up the back; as stated, when refering to designs, all goloshes are cut whole.

The last process is the only one which I rather doubt that the ordinary English machinist could do. The vamp or golosh is not stuck to the quarters, but is held loosely on and stitched round, the tongue being secured at same time. The cost of completely closing this upper is threepence (English) per pair—see Statement 3A. This department has a great advantage when compared to similar departments in England. Not only are the designs very simple to manipulate but in many things the standard is lower than in England. For instance, the Singer two-needle machine, as all two-needle machines must, makes a longer stitch in going round a curve on the outer row of stitching. This is considered a defect in England, and few are in use. In America the producer knows that the actual consumer is not an expert and so is not likely to detect so small a defect (?), and so many Singer two-needle machines are in use, thus saving much time.

The trimming attachment to stitching machines is quite commonly used, in fact practically all raw edge facings or top bands are trimmed and stitched at the same time; the statement of wages for stitching includes trimming.

Low grade mens and boys' often have the back seam welted in one seam, the whole of the closing being done on the flat. This method, at one time common in England, has been abandoned here as unsatisfactory, although the ease of the progress is quite recognised. In America its defects do not prevent it being used, and probably some English buyers of American shoes would decline such work if submitted by English houses.

Button work does not differ in principle from lace, the bagging process is applied. In a few cases the whole goloshes are fitted on the round, but where it is so the cost is quite equal to the cost in England. The statement of wages given shews cost and order of processes.

The standard of style for ladies and girls' work is similar to the French; straight tops and button pieces, or where scolloped, with shallow and softly-folded scollops are usual. The one-person-one-operation system is carried out in this work even more thoroughly

than in men's work, and many more labour-saving machines are in use. Beaders and shapers are in use, the Booth button scollop beader appearing to be an excellent contrivance.

Many machines used on this work are loop-stitch. With the soft material and smooth cotton used, it appears to be satisfactory for sewing machines; but for stitching, lock-stitch machines are usual. I do not think we are likely to adopt the loop-stitch, experience having proved the lock-stitch principle best for English trade. Button sewing, as well as the Singer and "Reece" button-holing and barring machines are in use.

All work leaves this department with side linings cemented in, laced or buttoned up, and paired.

The statements given are for the actual processes mentioned, no extra labour is expected, and all skiving is executed prior to the work being sent from the cutting-room.

STATEMENT OF WAGES. 3a.

Fitting and Machining.

* MEN'S AND BOYS' LACE.

DESCRIPTION.	Per 12 prs. American.	Per 12 prs. English. £ s. d.
Sticking facings	$0·03	1½
Seaming lining, back web or strap ..	·05	2½
Stitching inside facing and tongue ...	·05	2½
Turning in facing (Dufkin folder) ...	·05	2½
Seaming backs	·03	1½
Stitching facings	·05	2½
,, top	·05	2½
Turning down	·05	2½
Stitching and trimming front facing (Singer or Barber trimmer)	·09	4½
Seaming golosh	·03	1½
Stitching cap	·03	1½
Vamping (Singer two-needle) held on ...	·18	9

WAGES PAID PER WEEK.

DESCRIPTION.	Per 59 hours. American.	Per 59 hrs. English. £ s. d.
Pasters	$13·00	2 14 2
Seamers	13·00	2 14 2
Stitchers	15 00	3 2 6
Vampers (goloshers)	18·00	3 15 0

STATEMENT OF WAGES. 3b.

Fitting and Machining.

MEN'S AND BOYS' BUTTON.

DESCRIPTION.	Per 12 prs. American.	Per 12 prs. English. £ s. d.
Strapping	$0· 5	2½
Closing on band	· 3½	1¾
,, fly	· 4	2
Seaming on button piece	· 5	2½
,, back seam	· 6	3
Open stitching	· 6	3
Seaming lining and outside	· 7	3½
Turning and pasting	·11	5½
Stitching top	· 6	3
Open stitching front	· 7	3½
Staying top band	· 5	2½
Buttoning (Standard)	· 6	3
Stitching button holes (Binger)	·10	5
,, heel	· 3	1½
,, caps	· 3	1½
Vamping, held on (Singer cylinder) ...	·37½	1 6¾
Per 12 pairs	1·25	5 2½

STATEMENT OF WAGES. 3c.

Fitting and Machining.

WOMEN'S AND GIRLS' BUTTON AND LACE.

DESCRIPTION.	Per 60 prs. American.	Per 60 prs. English. £ s. d.
Seaming up lining	$0· 6	3
Webbing, two needles...	· 7	3½
Closing on bands	· 8	4
,, fly linings	· 8	4
Rubbing seams	· 8	4
Gumming button stays	· 7	3½
Closing backs and front	·16	8
Open stitching back, two needle... ...	·15	7½
Rubbing seams	·10	5
Folding quarters (Lufkin)	·46	1 11
Marking button piece	· 8	4
,, quarters for buttons	·13	6½
Seaming top and button piece	·40	1 8
Turning out (Columbia)	·40	1 8
Stitching top row	·40	1 8
Working holes (Reece), per 100	· 6	3
,, ,, (Singer double), per 100 ...	· 6	3
Finishing holes, four stitches, pull through, and snip, per 100	· 7	3½
Staying and buttoning bottom button ...	·15	7½
Seaming lining	·10	5
Vamping, two rows (Singer)	·90	3 9

Bottoming Room.

There is a marked contrast between these rooms as seen in America and England. In America there is an entire absence of the dirt and litter so common in England, the operatives wear overalls at their work in most shops, and generally the room has a much more orderly and systematic appearance. This is partly explained by the fact that the cutting and trimming by individual workers necessary under the English want of system, is completed before the work reaches this department, and so there is no operation to be performed which is productive of waste or shreds of any kind.

There appears to be some confusion in England concerning the work actually performed by the "laster" under the American system. As stated before, the parts arrive at this department fitted for attachment, so that positively no knifing or shaping whatever is required. This should be clearly understood when comparing list of wages paid. The lasting operation consists of simply tacking the upper over the insole, all the other operations included in lasting by the English system are considered separate and distinct operations.

Again, the tapping up and beating preparatory to "shopping," over which some men waste so much time in England, is unknown; the laster simply tacks over and passes the work along, the last being drawn by another operator. Hand lasters in Lynn are allowed to wet the uppers for one inch along the edge; notices being posted in the shops that anyone detected wetting tops above that amount is liable to be discharged. A much longer tingle is used than allowed in light work in England, all grindery is found, and puffs and stiffenings are delivered to laster ready prepared.

In hand lasting at Lynn the workers use a stand which holds the bottom of the shoe at an angle so that it nearly faces the worker. This is a great improvement to the horizontal position usual in England, and does away with the need for the laster to stoop over his work, and it certainly apears a quicker arrangement as well.

Although machine lasting is common, it has not entirely displaced hand methods. For women's work hand lasting is general, and even in men's work much of the higher grade work is lasted by hand.

The concentration of the workers is very noticeable, all appearing to be doing their utmost; each worker fits up any little special piece of kit he finds facilitates the work, and all seem to be straining to get the best possible output from the system in use.

The arrangement of the men varies with the method in use. In hand lasting the lasters represent the first operation, and are usually grouped together. The next in order are the bottom fillers and sole layers (for M'Kay work). I found most firms using a combination of rubber solution and ground cork for filling in the bottoms. This, in combination with the cemented side lining, produces a damp-proof boot even in the lightest work; for common work the dust from the finishing machines is substituted for the cork.

Where machines of the "Chase" or "Copeland" type are used short benches are provided at the side of each machine. The "team" of men usually seen working to these machines in England are not seen in America. Sometimes a tacker-over is seen in combination with a laster or "operator" on a "Chase," "Copeland," or "Ideal;" but, as a rule, the operator also tacks over. This method of working these machines allow of them being placed along the side of windows, and in rows in centres of rooms, as in upper stitching machinery. The "Consolidated" machine requires another arrangement, the proportion of tackers to operators being three to one. The machines are placed facing one another in pairs, between two short benches, each bench having stands for three tackers. From this it will be understood that the actual tacking over is all that is undertaken at this stage of production. The bottom fillers, sole layers, seat and toe nailers, sluggers, heelers, sewers, and bottom levellers are quite distinct operations, thus making it much simpler to work any one, compared to the English method of combining several of these operations as one process. The system, I am sure, is mainly the cause of the great speed attained; many of the fastest workers are Englishmen, who in conversation assured me that they were not considered at all quick in England.

STATEMENT OF WAGES. 4a.

LASTING.

WOMEN'S, MISSES', AND CHILDRENS.

* $1·00 considered equivalent to £0 4s. 2d. English; nearest ¼d. given in each case.

Hand Lasting.

DESCRIPTION.	M'KAY SEWN.		GOODYEAR WELTED.	
	Per pair American.	Per pair. English. £ s. d.	Per pair. American.	Per pair. English. £ s. d.
French Glacé Kid ...1sts	$0·06½	3¼	$0·08	4
,, ,, ,, ...2nds	·05½	2¾		
American ,, ,, ...1sts	·06	3	·07	3½
,, ,, ,, ...2nds	·05	2½		
,, Dongola ,, ...3rds	·04½	2¼		
,, ,, Grain ...3rds	·04½	2¼		
,, Sheep ...3rds	·04½	2¼		
,, Split ...4ths	·04	2		
,, Canvas ...4ths	·04	2		
,, Serge ...4ths	·04	2		

Definition of Materials.

Coloured as black. Soft Kid as Glazed Kid. Vici, Mocha, Blackhead, and all mongrel stock as American Kid. Bass ball as Goat.

Extras and Deductions.

DESCRIPTION.	Per pair. American.	Per pair. English. £ s. d.
Patent Cap...	$0·1½	¾
Common ,, ...	·01	½
Mock ,, ...	·00½	¼
Box Toe	·01	½
Samples	·00½	¼
Shellac Toe, with leather	·01	½
,, ,, without ,, ...		
Patent Vamp	·02	1
,, Golosh	·01	½
Common ,, ...	·00½	¼
,, Vamp	·01	½

72 pairs 5 to 10, equal 60 pairs 11 to 7.

The M'Kay sewer is used for all low grade goods, men's or women's; and for much medium quality work. The much advertised three dollar shoe is made M'Kay sewn. I was somewhat disappointed to find this so, for I had understood that the machine welted system was in use for shoes sold at a little over one dollar. I could not find any lists containing quotations for welted shoes near that price.

Machine welts are made in large quantities, and in style better I think than produced in England, practically the "Goodyear" welter is the machine in universal use. Owing no doubt to a longer experience of its use and the exact prepartion of the parts, the difficulties of the process as worked in England are not in evidence in America. I was shewn a Lock-stitch welter in Lynn, produced by the Goodyear Company. It was thought to be an advance on the Loop-stitch machine, and was especially approved for turned shoe work. The sewers and stitching machines produced by this Company were in use in all the factories I visited where machine welted work was made.

STATEMENT OF WAGES. 4b.

LASTING.

MEN'S AND BOYS'.

* $1·00 considered equivalent to £0 4s. 2d. English; nearest ¼d. given in each case.

Hand Processes.

DESCRIPTION.	M'KAY SEWN.		HAND & GOODYEAR WELTS.	
	Per 12 prs. American.	Per 12 prs. English. £ s. d.	Per 12 prs. American.	Per 12 prs. English. £ s. d.
Lasting, plain toe	$0·96	4 0	$1·08	4 6
,, cap and box	1·20	5 0	1·50	6 3
Rounding and feathering innersoles	·24	1 0	·72	3 0
Sewing on welts, 3½ stitches to inch, thread found by employer—				
Plain toe	...	...	2·52	10 6
Cap and box	..	...	2·88	12 0
Rounding and fitting single soles..	1·08	4 6	1·50	6 3
,, ,, double ,,	1·30	5 5	1·68	7 0
Fitting sole ready rounded ...	...	...	1·08	4 6
Filling	·12	6	·12	6
Laying soles and opening channels	·54	2 3	·54	2 3
Nailing seats and attaching split-lifts	·18	9	·18	9
Stitching single soles	...	...	4·56	19 0
,, double ,, ...	...	...	4·56	19 0
,, aloft	...	...	5·40	1 2 6

Machine Processes.

Description.	Machine used.							
	Consolidated. M'Kay Sewn.				Chase. Drawing over and operating.			
	Drawing over.		Operating.		M'Kay Sewn.		Goodyear Welts.	
	Per 24 prs. American.	Per 24 prs. English. £ s. d.	Per 24 prs. American.	Per 24 prs. English. £ s. d.	Per 24 prs. American.	Per 24 prs. English. £ s. d.	Per 24 prs. American.	Per 24 prs. English. £ s. d.
Lasting, Men's cap toe	$0.60	2 6	0·24	1 0	1·20	5 0	1·56	6 6
,, ,, plain ,, ...	·54	2 3	·24	1 0	1·08	4 6	1·26	5 3
,, Boys' & Youths' cap toe..	·48	2 0	·20	10	1·08	4 6	1·26	5 3
,, ,, ,, plain ,,	·48	2 0	·20	10	1·08	4 6	1·26	5 3
,, Men's common cap toe ...	·54	2 3	·24	1 0				
,, ,, ,, plain ,, ...	·48	2 0	·24	1 0				
Patent cap, extra	...	..	...	...	·24	1 0	·24	1 0

All work passed to men prepared for drawing over.

Machine Lasting

PULLING OVER in lots of 60 pairs, see extras for less.

DESCRIPTION.	NAME OF MACHINE.			
	THE "NIGGER."		CONSOLIDATED.	
	Per 60 prs. American.	Per 60 prs. English. £ s. d.	Per 60 prs. American.	Per 60 prs. English. £ s. d.
French Glazed Kid 1st ...	...	...	$2·55	10 7½
,, ,, ,, 2nds ...	...	...	1·95	8 1½
American ,, ,, 1st ...	...	...	2·25	9 4½
,, ,, ,, 2nds ...	$1·05	4 4½	1·65	6 10½
,, Dongola 3rds ...	·75	3 1½	1·35	5 7½
,, ,, Grain ,, ...	·75	3 1½	1·35	5 7½
,, Sheep ,, ...	·75	3 1½	1·35	5 7½
,, Split 4ths ...	1·05	4 4½	1·05	4 4½
Canvas and Serge ,, ...	·75	3 1½	1·05	4 4½

Operating.

The NIGGER or the CONSOLIDATED.	Per 60 prs. American.	Per 60 prs. English. £ s. d.
Plain toes	$·60	2 6

Conditions.

All work brought to laster buttoned or laced and turned.
All stock completely fitted.

Extras.

DESCRIPTION.	PULLING OVER.		OPERATING.	
	Per 60 prs. American.	Per 60 prs. English. £ s. d.	Per 60 prs. American.	Per 60 prs. English. £ s. d.
Patent Cap	$0·67½	2 9¾	$0·22½	11
Common Cap	·45	1 10½	·15	7
Cap as upper	·22½	11¼	·07½	3¾
Patent Vamps	·90	3 9	·30	1 3
Common ,, ...	·45	1 10½	·15	7½
Patent Golosh	·45	1 10½	·15	7½
Common ,, ...	·22	11	·07½	3¾
Needle Toe	·22½	11¼	·07½	3¾
Box ,, ...	·60	2 6		
Shellac ,, without leather ...	·30	1 3		
,, ,, with ,, ...	·60	2 6		
Samples	·30	1 3	·30	1 3½

Attaching Operations.

Description.	By Hand.		By Machine.	
	Per 60 prs. American.	Per 60 prs. English. £ s. d.	Per 60 prs. American.	Per 60 prs. English. £ s. d.
Sole Laying	$0 60	2 6	$0·30	1 3½
Nailing Seat	·30	1 3½	·10	5
,, ,, and Toe ...	·60	2 6	·20	10
M'Kay Sewing	...	...	·40	1 8½
Beating out—"Bresnahan" ...	...	...	·40	1 8½
Heeling	...	...	·35	1 5½
Breasting on last	...	...	·50	2 1
,, off ,, ...	...	...	·10	5

The machines in use are all well known in England, in fact many still used in America have been considered obsolete for some years in England The "Chase" or "Copeland" appear to be in favour for welted work, the Consolidated for M'Kay sewn.

Shoes made by hand processes only are produced by system as usual for machine processes. Thus hand-welted work is fitted up the same as if for machine welts. The division into lasters, sewers, fillers, etc., being pursued. The bottom stock is prepared as exactly as for machine, and consequently the processes mentioned do not represent so much work as they would do under the English system

Finishing Room.

All shoes are machine-finished in America, and as the machines used are identical with those in use in England, and the order is the same, there is not any marked difference. As in the stitching room, the operatives are provided with ample bench room. In very rapid work the men appear to find it quicker to pick up, "operate," and put down a short run, than to take off and replace on a horse or rack. The square form of shop admits of these machines being arranged before windows, the removal and supply of work being regulated from the centre of the shop.

STATEMENT OF WAGES. 5a.

FINISHING.

WOMEN'S, MISSES', AND CHILDREN'S.

* $1·00 considered equivalent to £0 4s. 2d. English ; nearest ¼d. given in each case.

Edge Trimming and Scouring.

DESCRIPTION.	Per 60 prs. American.	Per 60 prs. English. £ s. d.
Shaving heels—Bussell machine	$0·40	1 8
Trimming edges ,, ,, ...	·30	1 3
,, ,, spring heels	·80	3 4
Scouring	·30	1 3

Edge Setting.

Set once—blacking edges included.

DESCRIPTION.	Per 60 prs. American.	Per 60 prs. English. £ s. d.
Square edge—Union machine	$0·55	2 3½
Yellow ,, ,, ,, ...	·60	2 6
Fair stitch ,, ,, ...	·60	2 6
Spring heels ,, ,, ...	1·05	4 4½
,, ,, fair stitch—Union machine ...	1·10	4 7
Goodyear welts ,, ,, ...	·95	3 11½

All edge setting, on Beaudry machine, 10c. per case less.

Burnishing Heels.

DESCRIPTION.	SINGLE TAPLEY.		TWIN TAPLEY.	
	Per 60 prs. American.	Per 60 prs. English. £ s. d.	Per 60 prs. American.	Per 60 prs. English. £ s. d.
Black once, burnish twice on last.	$0·50	2 1		
,, ,, ,, ,, off ,,	·40	1 8		
,, twice ,, once ...	..	..	·0·30	1 3
,, ,, ,, ,, Goodyear welts and hand turned ...	...	...	·50	2 1

Brush method, per day, $2·50. £0 10s. 5d. English.

Various Processes.

Description.	Per 60 prs. American.	Per 60 prs. English. £ s. d.
Buffing foreparts, shanks, and top-pieces ...	$0.30	1 3
Re-lasting	·15	7½
Putting on Scotch edge	·20	10
Trimming heel seats	·10	5
Heel beading by machine	·10	5
Taking out lasts	·08	4
Hard bottom finish—1st coat	·15	7½
,, ,, ,, 2nd ,, ...	·15	7½
Cleaning bottoms—"Naumkeag" ...	·10	5
Lining and tying	·15	7½
Cleaning uppers	·10	5

Extras.

Samples 40 per cent. extra on all parts.

STATEMENT OF WAGES. 5.

FINISHING.

Men's and Boys'.

Description.	Per 12 prs. American.	Per 12 prs. English. £ s. d.
Shaving heels	$0· 6	3
Trimming edges		
M'Kay sewn	·12	6
Cork soles	·16	8
Stitched to heel	·22	11
,, aloft to heel	·22	11
Hand-sewn	·25	1 0½
Goodyear's	·25	1 0½
Samples, per pair	·5	2½
Filing top-pieces	·2	1
Screwing heels	·4½	2¼
Blacking edges—Rockingham	·1½	¾
Stoning ,, ,, ...	·2½	1¼
Seat wheel	·1½	¾
Screwing bottom and top-piece	·8½	4¼
Blacking top-piece	·1	½
Brushing ,, ...	·2	1
Cutting shanks	·1½	¾
Welting forepart	·8	4
Gumming bottoms	·4	2
Polishing ,, ...	·4	2
Blacking shanks—new method	·3	1½
Burnishing ,, and wheeling	·6	3
Faking and brushing shanks	·2½	1¼

FINISHING—(*Continued*).

Description.	Per 60 prs. American.	Per 60 prs. English. £ s. d.
Setting edges		
M'Kay sewn	$·12	6
Three sole	·15	7½
Cork sole, double sole, top sole, stitched to heel	·15	7½
Hand-sewn, set twice	·24	1 0
Goodyear's	·15	7½
Samples, per pair	·6	3
All other goods, per day	·12	6

The quick black process is coming rapidly into use, and the 'Rockingham" and "Tapley" heel burnishers are in general use. For edge setting the reciprocating setter is used in most shops, results being produced which are far in advance of English work, hollow bevels and part-coloured edges being set up in a beautiful manner. The operatives complain of the exhausting effect of working some machines, of which the edge setter is one complained of. A machine has been recently introduced which has a rotary action and is free from vibration. This machine, "The Baudry," is certainly easy to work and very rapid, but fit only for low grade work.

The Treeing and Packing Rooms.

The "treeing" room, as seen in American factories, is practically unknown in England. It is called finishing in America, and has a special statement of wages. The goods have trees inserted into them, are strained and sleeked into shape, cleaned, and sized. Generally there is a special room for the "faking" up of little defects, and the complete dressing and preparing for wear of all goods before being boxed. Boxing is as in England, but the boxes and the cases are made to fit, so that there is no danger of injury to boxes by crushing or shaking. This method allows of a great speed in packing. At one place I saw a girl packing, whose output was 250 cases per day, completely packed by this one person.

Statements of Wages.

The comparison of English and American statements of wages is somewhat mis-leading, without a careful consideration of the conditions under which each process is worked. The preparation in America of the parts in some processes is so exact, and has such an excellent effect in making subsequent processes easy compared to similar processes as worked in England without preparation, that to compare English and American lists of wages without such allowances is ridiculous. There is no standard wage list accepted by all manufacturers in a district or town as in England. Statements are compiled for the use of each shop based on the average wage paid, but with such modifications as the individual manufacturer may require; the system appears to work fairly well. The specimen statements submitted represent the average payment for the processes mentioned. They are compiled from data supplied by employers, workmen, secretaries of trades' unions, and publications of State Boards of Arbitration.

Boards of Arbitration.

Laws providing for the settlement of disputes between employers and employés by means of mediation, conciliation, and arbitration have been enacted in twelve States. But State Boards of Arbitration, with official experts and arbitrators, have been established in Massachusetts, New York, Ohio, California, and New Jersey. In each case the Board is prepared to act, free of charge, on application from both sides, but no cessation of work must take place. Both parties to the dispute must continue in the usual way prior to the decision of the State Board being made known. All evidence is taken in public, and the decisions are binding to each party for six months; notice of protest must be made and is considered during the six months. The Board consists of permanent officials appointed and paid by the State. In Massachusetts it appears to have been successful in settling disputes involving vast sums.

Strikes and lock-outs have however been common and of a very bitter description, and the industry of large towns displaced, generally without any good result to either side. Inspection of the record shews that, as a rule, trade was injured without any benefit whatever resulting.

General Remarks.

From what I observed I do not think the American has any advantage over the English shoe manufacturer. The system and order is as possible in England as there, and it only remains for us to adopt such organised methods to be in a position to compete successfully with them in any market outside North America. Even now I am sure that price for price the English shoe is better value than the American. English low-grade shoes are produced by low-grade labour; much of the difference in price represents the difference in cost of labour alone. This is not so possible in America, and so low-grade shoes are produced by substituting inferior material, consequently they have a smart appearance but no durability. A trade in England may be established, but through the novelty only.

Owing to the general adoption of payment by the piece, there is perfect equality between male and female workers. I found females working at heeling and other attaching machinery, and men working golosh machines; no attempt being made to separate the sexes. There was no apparent lack of respect in the bearing of the men toward the female workers, in fact the women workers appear to demand, and get, a greater amount of deference paid than the usual English factory worker.

There is no apprenticeship system among shoe workers in America. Youths and girls after sixteen give about three months free, to enable them to become familiar with factory life, and are then placed upon the usual footing as piece workers, or receive from six to nine dollars per week. As a rule they work at this payment until they feel capable of earning more by the piece, and then take a position as a piece worker.

The principal machines in use are well known in England,—have indeed been in use here for some time. But many machines used for preparatory work have yet to be adopted by us. the use of these machines and the exact preparation of all details in the parts of the work, would give all the advantages the Americans now possess.

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